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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Gerald Adams

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UNILEVER PATENT GROUP
800 SYLVAN AVENUE
AG West S. Wing
ENGLEWOOD CLIFFS, NJ 07632-3100

EXAMINER

SIMMONS WILLIS, TRACEY A

ART UNIT

PAPER NUMBER

1619

MAIL DATE

DELIVERY MODE

05/12/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,631	Applicant(s) ADAMS ET AL.	
	Examiner TRACEY SIMMONS WILLIS	Art Unit 1619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,7-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,7-15 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02102009</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1619

DETAILED ACTION

Status of the Claims

Applicant's amendments filed February 10, 2009 to claims 1-2, 7-10, and 12-14 have been entered. Claims 3, 5, 6, 11, and 16 have been cancelled. Claim 17 has been added. Claims 1-2, 7-10, and 12-15, remain pending and are being considered on their merits.

Newly submitted claim 17 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: introduction of the divalent linker groups within the polymer creates a new type of block copolymer.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 17 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

References not included with this Office action can be found in a prior action. Any rejections or objections of record not particularly addressed below are withdrawn in light of the claim amendments and applicant's comments.

Information Disclosure Statement

One information disclosure statement (IDS) submitted on February 10, 2009, has been received. The submission is in compliance with the provisions of 37 CFR 1.97 and 37 CFR 1.98. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

Claims 1 and 4 objected to because of the following informalities: The molecular weights need units included with the values (lines 4-6 of claim 1, and line 2 of claim 4). Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2, and 7 are rejected under 35 U.S.C. 102(a) as being anticipated by *European Polymer Journal*, vol 39, pgs 2243-2252 (2003, Batt-Coutrot et al).

Batt-Coutrot teach of block copolymers of poly(vinyl acetate), more specifically an ABA block copolymer of in which the A block is (dimethylamino)ethyl methacrylate and the B block is poly(vinyl acetate) [abstract]. Synthesis of the copolymer is outlined in Scheme I, compound II [pg 2247] with ¹H-NMR analysis shown in Fig 6 [pg 2249]. ¹H-NMR analysis was done using both in deuterated chloroform and in deuterated water (carrier) [pgs 2249-2250]. Light scattering measurements of the polymer were also performed in distilled deionized water

Art Unit: 1619

(cosmetically acceptable diluent). The number average number molecular weight of monomer B is 8700 [Table 1, pg 2245], and the average number molecular weight of monomer A throughout the reaction varied from 11,400 to 23,100 g/mol [pg 2248, Table 2].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4, 7-10, and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over *European Polymer Journal*, vol 39, pgs 2243-2252 (Batt-Coutrot et al) in view of International Patent Application Publication No. WO/2002/28357 (Frechet, et al).

Batt-Coutrot teach of block copolymers of poly(vinyl acetate), more specifically an ABA block copolymer of in which the A block is (dimethylamino)ethyl methacrylate and the B block is poly(vinyl acetate) [abstract]. Synthesis of the copolymer is outlined in Scheme I, compound II [pg 2247] with ¹H-NMR analysis shown in Fig 6 [pg 2249]. ¹H-NMR analysis was done using both in deuterated chloroform and in deuterated water (carrier) [pgs 2249-2250]. Light scattering measurements of the polymer were also performed in distilled deionized water (cosmetically acceptable diluent). The number average number molecular weight of monomer B is 8700 [Table 1, pg 2245], and the average number molecular weight of monomer A throughout the reaction varied from 11,400 to 23,100 g/mol [pg 2248, Table 2].

Art Unit: 1619

Batt-Coutrot does not teach of a hair (styling) composition, fragrance or perfumes, the amount of polymer in the composition, or of the additional adjuvants commonly found in a hair composition (propellant, structurant, surfactant).

Frechet teaches of hair styling compositions comprising block copolymers for treatment of hair [pg 1, par 1]. The copolymer as taught by Frechet is an ABA block copolymer [pg 7, par 2]. Monomers used for the copolymers are ethylenically unsaturated acrylic and methacrylic esters [page 14, mid-page], such as N,N-dimethylaminoethyl methacrylate [pg 17, mid-bottom of pg] and vinyl acetate [pg 18, par 1]. The copolymer is soluble in water, ethanol, or mixtures of both (cosmetically acceptable diluents or carriers) [pg 9, par 3]. Frechet further teaches that the composition can include a fragrance or perfume [pg 30, par 2] as an added component, and teaches of a propellant used in the composition in amounts ranging from 3 to 30 wt% [page 32, par 1]. *claims 8 and 13* Frechet also teaches of structurants or thickeners used in the composition in a range of 0.01 to 10 wt% [pg 32, par 3]. *claim 14* Frechet also teaches of the polymer present in 0.1-10 wt% of the composition [pg 30, par 2] and of 0.01 to 7.5 wt% surfactants in some forms of the composition [pg 32, par 1]. *claims 10 and 12* The composition of Frechet is applied to the hair [col 2, lines 66-67]. *claim 15*

One of ordinary skill in the art at the time of the invention would have been motivated to use the triblock copolymer of Batt-Coutrot in the invention of Frechet with a reasonable expectation of success as Frechet teaches of the genus of monomers used as block copolymers in the hair composition. Furthermore, Batt-Coutrot teaches of the block copolymers applied in uses such as adhesives [pg 2243], which would have corresponded to the better hold on hair as taught by Frechet [col 2, line 52].

Art Unit: 1619

With respect to the overall molecular weight of the copolymer (claim 4), while Batt-Coutrot does not teach the overall molecular weight of the copolymer, one of ordinary skill at the time of the invention using the molecular weights of the monomers would have been able to envision the molecular weight of the polymers to range between 31,500 and 54,900 g/mol.

Therefore the invention as a whole would have been *prima facie* obvious at the time it was made.

Response to Arguments

In Applicant's remarks (35 U.S.C. §102 (b), with regards to claims 1, 7, 9, and 15 and 1, 7-8, and 13-14), Applicant alleges that

- Mudge does not disclose ABA block copolymer per se or of the recited block monomers with the recited number molecular weight averages (pg 6-7), and
- Frechet does not exemplify the recited A and B block co-monomers (pg 7).

These arguments have been fully considered and are addressed by the new grounds of rejection.

In Applicant's remarks (35 U.S.C. §103 (a), with regards to claims 5 and 6 (Frechet), 4 (Papanatoniou), and 10 and 12 (Mudge) and 1-3, 7-8, and 13-14), Applicant alleges that

- Papanatoniou does not teach of the B monomers (pg 8).

These arguments have been fully considered and are addressed by the new grounds of rejection.

Conclusion

No claims are allowed.

Art Unit: 1619

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRACEY SIMMONS WILLIS whose telephone number is (571)270-5861. The examiner can normally be reached on Mondays to Fridays from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached at (571)272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/T. S.W./
Examiner, Art Unit 1619

/MP WOODWARD/
Supervisory Patent Examiner, Art Unit 1615